User's Manual

BPC70-B-C1G

Copyrights

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Liability Disclaimer

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

Regulatory Information

FCC Notices

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Increase the separation between the equipment and the receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio or television technician for help.

This device complies with Part 15 (B) of the FCC Rules. Operation is subject to the following two conditions:

1) this device may not cause harmful interference and

2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS DEVICE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE DEVICE.

CE Notice

This device complies with **EMC Directive 2004/108/EC** issued by the Commission of the European Community.

WEEE Notice

The **WEEE** mark applies only to countries within the European Union (EU) and Norway.

This appliance is labeled in accordance with **European Directive 2002/96/EC** concerning **waste electrical and electronic equipment** (**WEEE**). The Directive determines the framework for the return and recycling of used appliances as applicable throughout the European Union. This label is applied to various products to indicate that the product is not to be thrown away, but rather reclaimed upon end of life per this Directive.

Contents

Copyrights i
Liability Disclaimer i
Regulatory Information i
FCC Notices i
CE Notice i
WEEE Notice ii
Contents iii
Introduction 1
Unpacking the Box 2
Hardware Setup 3
3.1. Quick Tour 4
Front View 4
Rear View 4
3.2. Peripherals Installation 5
Power Adapter 5
USB Mouse, USB Keyboard and USB ODD 5
VGA LCD Touchscreen Monitor 5
LVDS LCD Touchscreen Monitor 6
LAN Cable 6
Cash Drawer 7
Audio Device 7
3.3. Turn on the Device 7
Driver and Utility Installation 8
4.1. Before the installation 9
4.2. Chipset Software Installation 9
4.3. VGA Driver Installation 11
4.4. LAN Driver Installation 12
4.5. Audio Driver Installation 13
Touchscreen Control Panel Quick Guide 14
5.1. Launch Touchscreen V7.3.COM 15
5.2. User interface 15
5.3. Serial Port Information 16
5.4. Virtual Button Settings 16
Virtual Button Option 16
Right Button Function 17
Right Button Automatic Mode 18
5.5. Feedback Sound 18
Feedback Sound Option 18
Tone 19

Duration 19
5.6. Screen Calibration 19
4 points, mode 1 19
4 points, mode 2 20
How to Use Event Selector 21
I/O Definition 22
6.1. Power Connector 23
6.2. Compact Flash Storage Card Socket 23
6.3. Serial Port 24
6.4. VGA Connector 24
6.5. LVDS Connector 25
6.6. USB Port Connector 25
6.7. Cash Drawer Connector (RJ-11) 26
Cash Drawer Control 26
6.8. LAN Connector (RJ-45) 26
Specification 27

1.

Introduction

We appreciate and are grateful for your purchasing of the BOXPC series product.

BPC-70-B-C1G/BPC-70-B-C15G adopts compact (L210 mm x W189 mm x H62mm), easy assembly/disassembly, modular and fan-less structure design, providing budget and space-saving solution and flexible application. The cost and time of maintenance could be reduced substantially.

The I/O interface of BPC-70-B-C1G/ BPC-70-B-C15G is equipped with four COM ports, four USB 2.0 ports and one LVDS connector, which allow you to set up your system as your needs without any hardware limitation. With a Compact Flash II card slot on board, the storage capacity of BPC-70-B-C1G/ BPC-70-B-C15G can be upgraded to 1GB.

BPC-70-B-C1G/BPC-70-B-C15G supports most popular Microsoft Windows series operation system (Windows XP Home Edition, Windows XP Professional Edition, WEPOS and Linux, making user spend less effort on technology and software- related issues— so user can devote all energy making your business successful.

2.

Unpacking the Box

Verify that the box contains the following items.

1	The Device X 1
2	Power Adaptor X 1
3	Power Cord X 1
4	Wall Mount Kit X 1
5	Mounting Accessory Kit X 1
6	Driver and utility CD X 1

3.

Hardware Setup

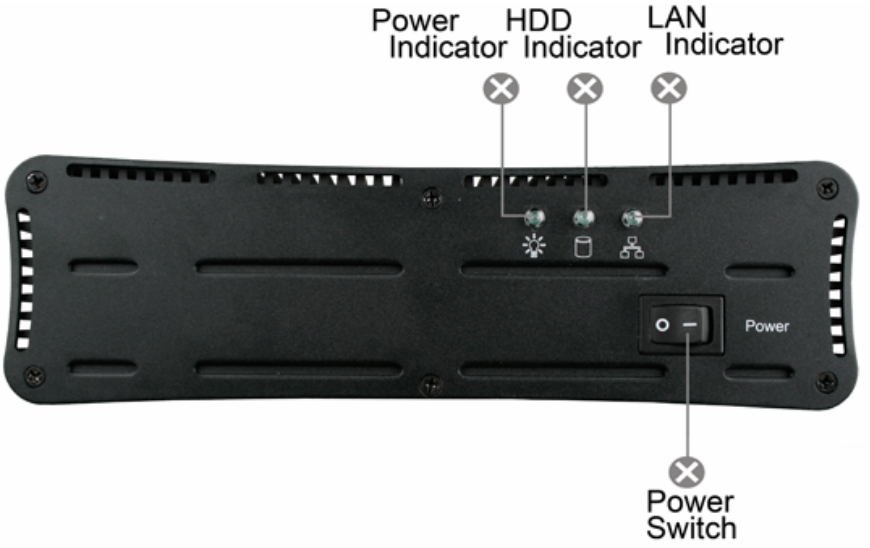
3.1. Quick Tour

3.2. Peripherals Installation

3.3. Turn on the Device

3.1. Quick Tour

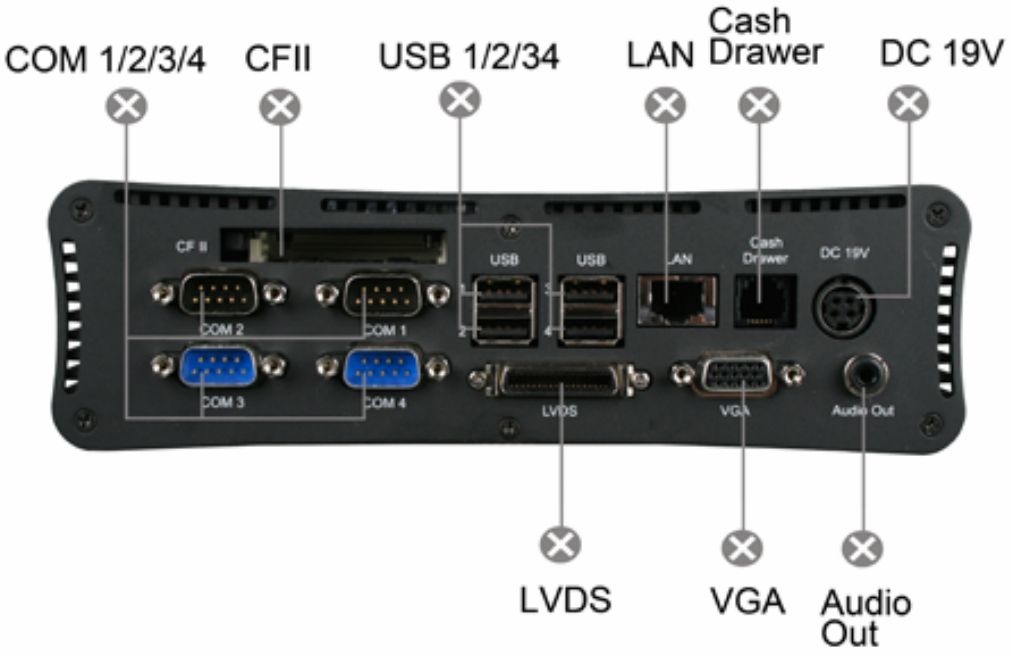
Front View



LED Indicator and Power Switch

	The **Power** indicator will glow green when power is on.
	The **HDD** indicator will blink green when the HDD is accessed.
	The **LAN** indicator will blink green when transferring data though the LAN.
	Press and hold the power switch until the power indicator on the front panel glow green

Rear View



Note: For details of I/O ports on the back panel, please refers to .

3.2. Peripherals Installation

Power Adapter

Connect the 4-pin output jack of the adapter to the **DC 19V** jack on the back panel of the device.

USB Mouse, USB Keyboard and USB ODD

Connect your USB Mouse, USB Keyboard and USB ODD to **USB** ports on the back panel of the device.

VGA LCD Touchscreen Monitor

1. Connect one end of the Serial Port Cable to the **COM** male port on the back panel of the device, another end to the COM port of your LCD panel.

2. Connect one end of the VGA cable to the **VGA** female port on the back panel of the device, another end to the VGA port of your LCD panel.

LVDS LCD Touchscreen Monitor

Connect one end of the LVDS cable to the **LVDS** male connector on the back panel of the device, another end to the LVDS end of your LCD panel.

LAN Cable

Connect one end of RJ-11 LAN cable to the **LAN** port on the back panel of the device, another end to your internet device.

Cash Drawer

Connect one end of RJ-45 cable to the **Cash Drawer** port on the back panel of the device, another end to your cash drawer.

Audio Device

Connect the phone jack of your audio device to the **Audio Out**.

3.3. Turn on the Device

1. Make sure all peripherals and power cable are connected properly.

2. Press and hold the power switch until the power indicator on the front panel glow green.

4.

Driver and Utility Installation

4.1. Before the installation

4.2. Chipset Software Installation

4.3. VGA Driver Installation

4.4. LAN Driver Installation

4.5. Audio Driver Installation

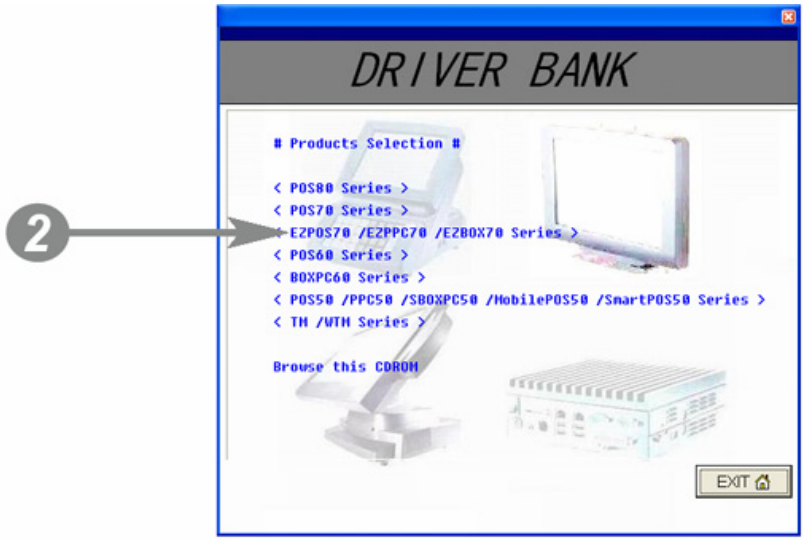
4.1. Before the installation

All installation procedures described below are based on Microsoft Windows XP.

For CD-ROM onboard model:
1. Insert the driver CD into the onboard CD-ROM drive. The program autoruns and displays the **DRIVER BANK** screen.
2. Follow the on-screen instructions.

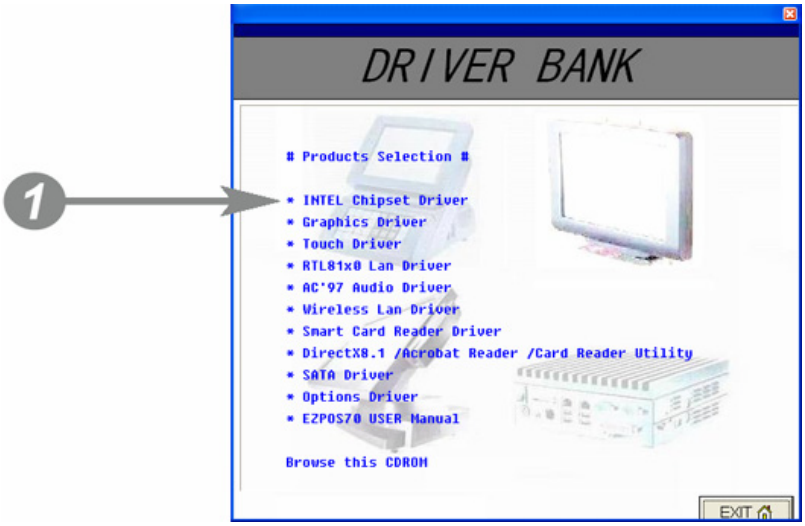
For Model without CD-ROM onboard:
1. Connect an external USB CDROM to the USB power and insert the driver CD and turn on the device. The program autoruns and displays the ***DRIVER BANK*** screen.

2. Click "**EZPOS70 /EZPPC70 /EZBOX70 Series**".

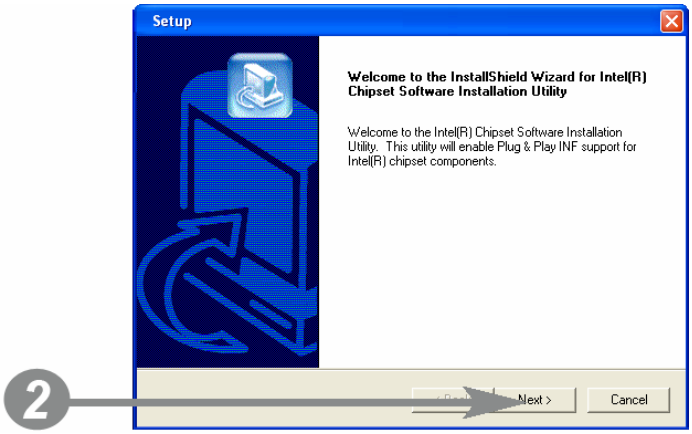


4.2. Chipset Software Installation

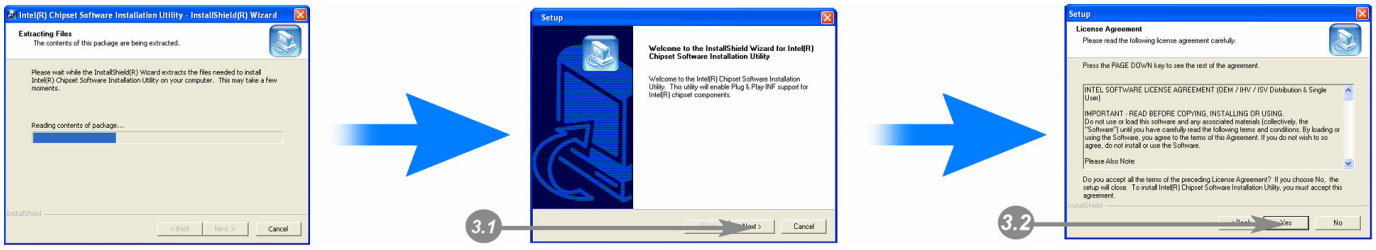
1.On the ***DRIVER BANK*** screen, click **INTEL Chipset Driver**.



2. Click **Next** to go to the next step.


Setup
Welcome to the InstallShield Wizard for Intel(R) Chipset Software Installation Utility
Welcome to the Intel(R) Chipset Software Installation Utility. This utility will enable Plug & Play INF support for Intel(R) chipset components.
Next >
Cancel
2

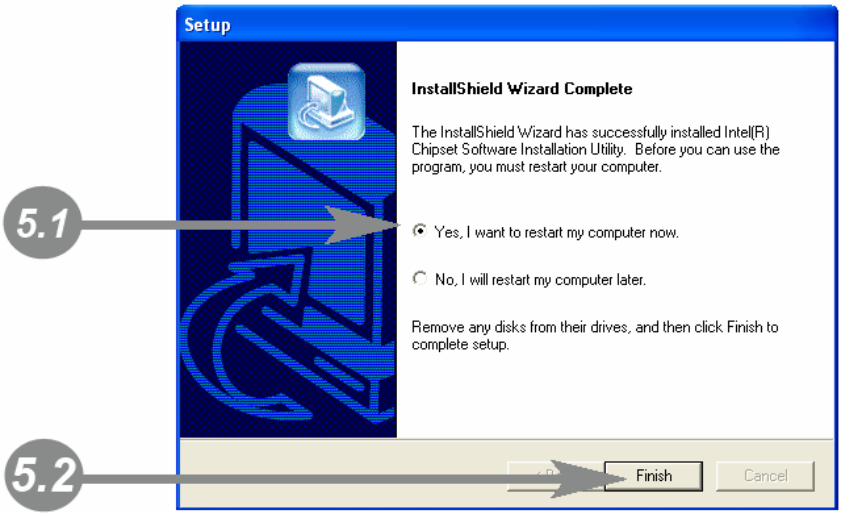
3. After files for installation extracted successfully, click **Next** to go to the **License Agreement**. And then click **Yes** to go to the next step.


Intel(R) Chipset Software Installation Utility - InstallShield(R) Wizard
Extracting Files
The contents of this package are being extracted.
Reading contents of package...
Setup
Welcome to the InstallShield Wizard for Intel(R) Chipset Software Installation Utility
3.1
License Agreement
Please read the following license agreement carefully.
Press the PAGE DOWN key to see the rest of the agreement.
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single User)
Do you accept all the terms of the preceding License Agreement? If you choose No, the setup will close. To install Intel(R) Chipset Software Installation Utility, you must accept this agreement.
Yes
No
3.2

4. Read license agreement carefully and click **Yes**, and then click **Next**.

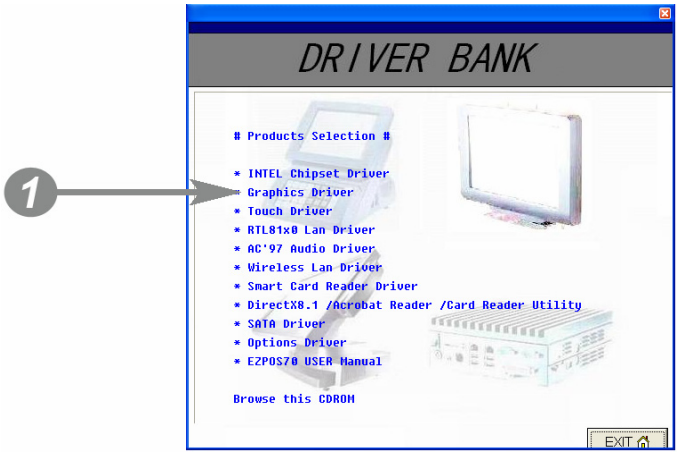
Setup
License Agreement
Please read the following license agreement carefully.
Press the PAGE DOWN key to see the rest of the agreement.
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single User)
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and condkions. By loading or using the Software, you agree to the terms of this Agreement. If you do not wish to so agree, do not install or use the Software.
Please Also Note:
Do you accept all the terms of the preceding License Agreement? If you choose No, the setup will close. To install Intel(R) Chipset Software Installation Utility, you must accept this agreement.
Yes
No
4.1
Readme Information
Readme.txt
* Product: Intel(R) Chipset Software Installation Utility
* Release: Production Version
* Version: 6.3.0.1007
* Target Chipset#: Intel(R) E8500
* Date: November 24, 2004
NOTE: For the list of supported chipsets, please refer to the Release Notes
Next >
Cancel
4.2

5. Installation completed. Select an option to restart computer now or later, and then click **Finish**.

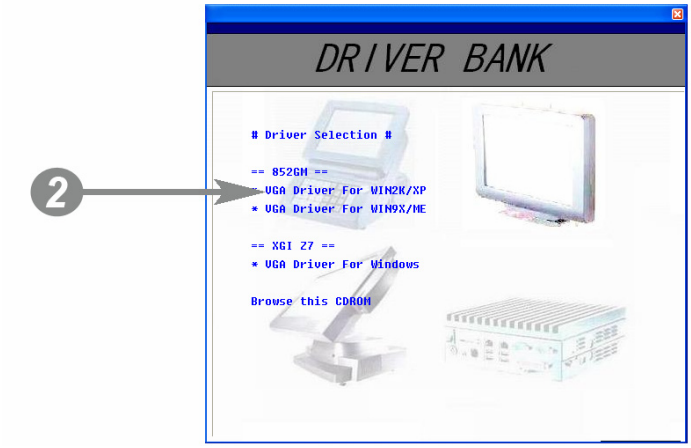

Setup
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed Intel(R) Chipset Software Installation Utility. Before you can use the program, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
5.1
Finish
Cancel
5.2

4.3. VGA Driver Installation

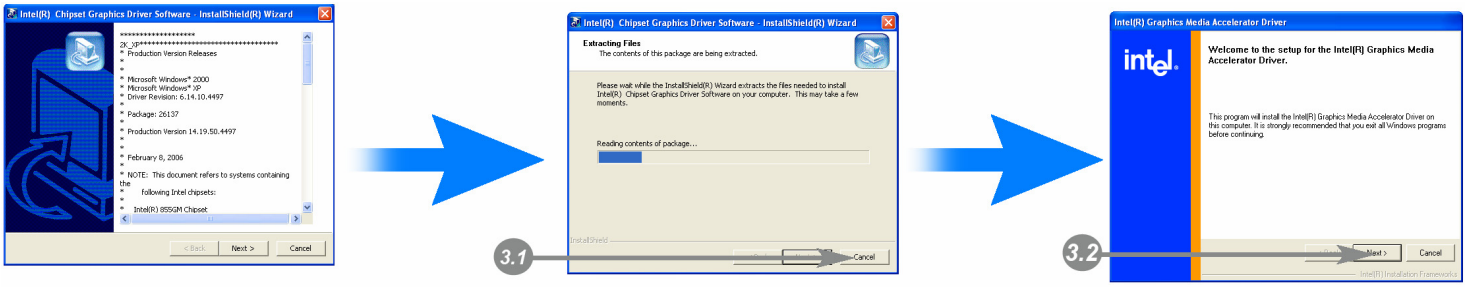
1. On the ***DRIVER BANK*** screen, click **Graphics Driver.**.



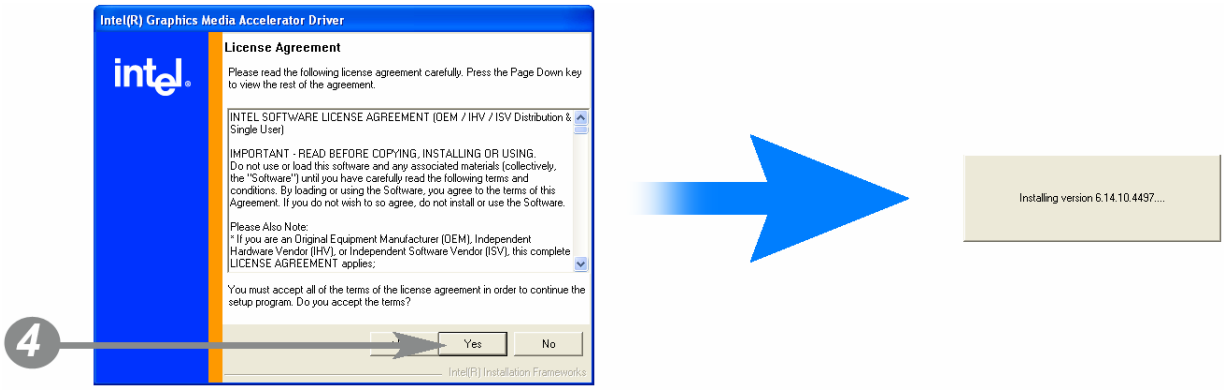
2. Click **VGA Driver for WIN2K/XP**.



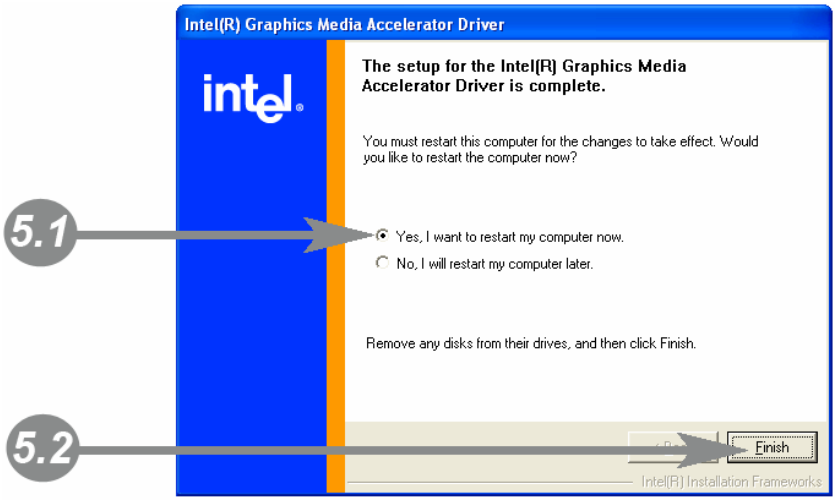
3. Click Next to go to the next step. After files for installation extracted successfully, click **Next** to go to the **License Agreement**.



4. Read license agreement carefully and click **Yes** to install graphics driver.

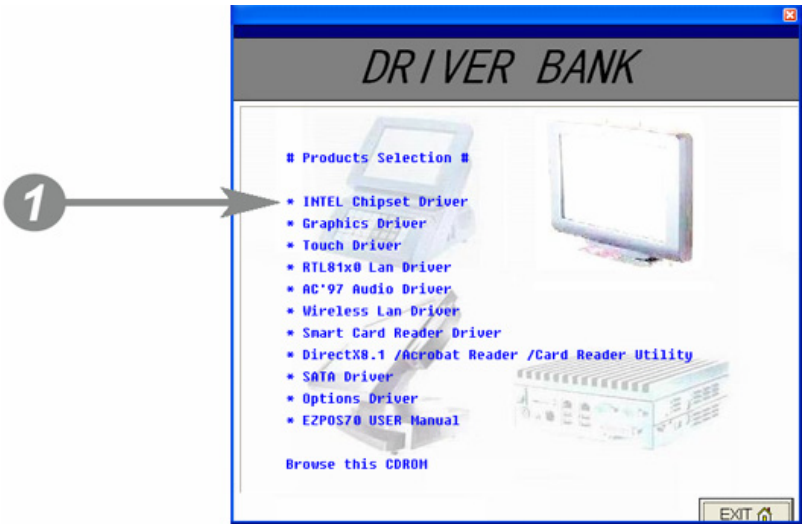

Intel(R) Graphics Media Accelerator Driver
License Agreement
Please read the following license agreement carefully. Press the Page Down key to view the rest of the agreement.
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single User)
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loading or using the Software, you agree to the terms of this Agreement. If you do not wish to so agree, do not install or use the Software.
Please Also Note:
* If you are an Original Equipment Manufacturer (OEM), Independent Hardware Vendor (IHV), or Independent Software Vendor (ISV), this complete LICENSE AGREEMENT applies;
You must accept all of the terms of the license agreement in order to continue the setup program. Do you accept the terms?
Yes
No
4
Installing version 6.14.10.4497....

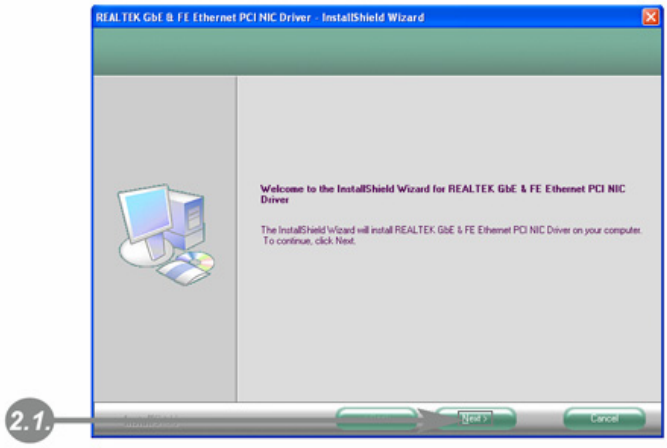
5. Installation completed. Select an option to restart computer now or later, and then click **Finish**.

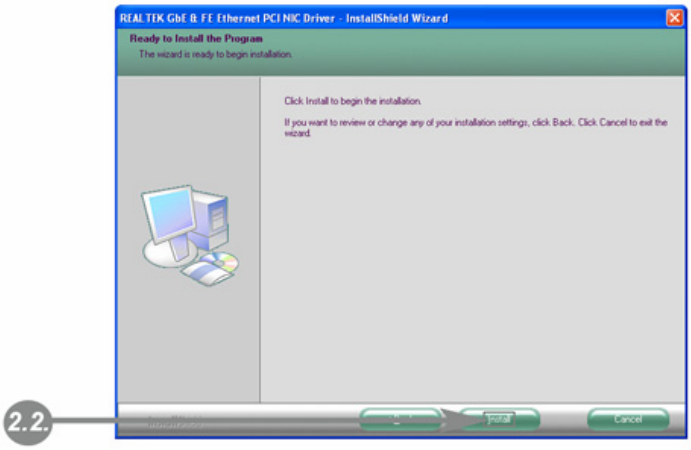

Intel(R) Graphics Media Accelerator Driver
intel
The setup for the Intel(R) Graphics Media Accelerator Driver is complete.
You must restart this computer for the changes to take effect. Would you like to restart the computer now?
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish.
Finish
Intel(R) Installation Frameworks
5.1
5.2

4.4. LAN Driver Installation

1. On the ***DRIVER BANK*** screen, click **RTL81x0 LAN Drive**.

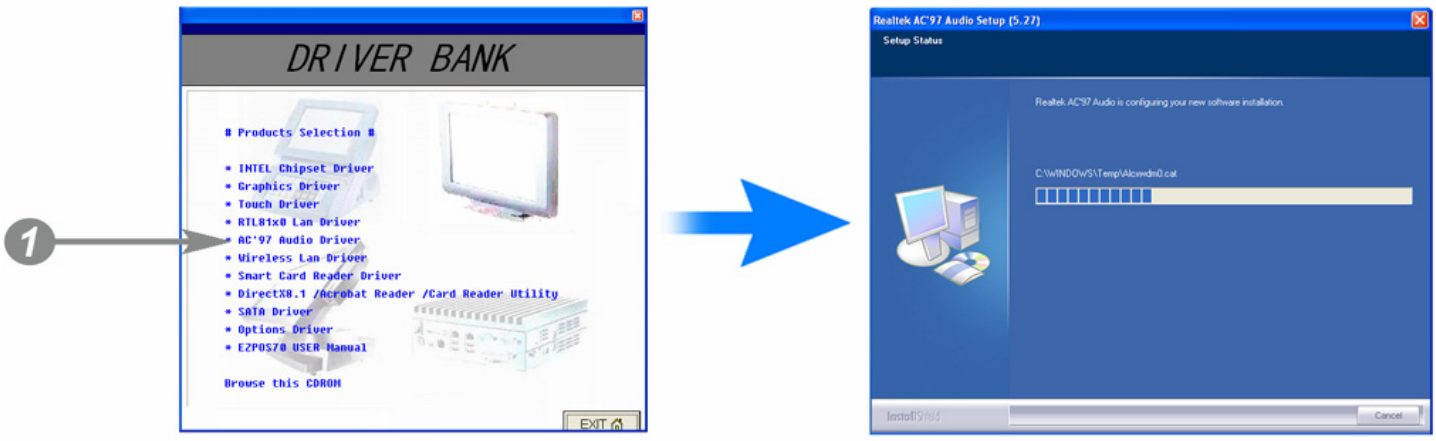



REALTEK GbE & FE Ethernet PCI NIC Driver - InstallShield Wizard
Welcome to the InstallShield Wizard for REALTEK GbE & FE Ethernet PCI NIC Driver
The InstallShield Wizard will install REALTEK GbE & FE Ethernet PCI NIC Driver on your computer. To continue, click Next.
Next
Cancel
2.1.

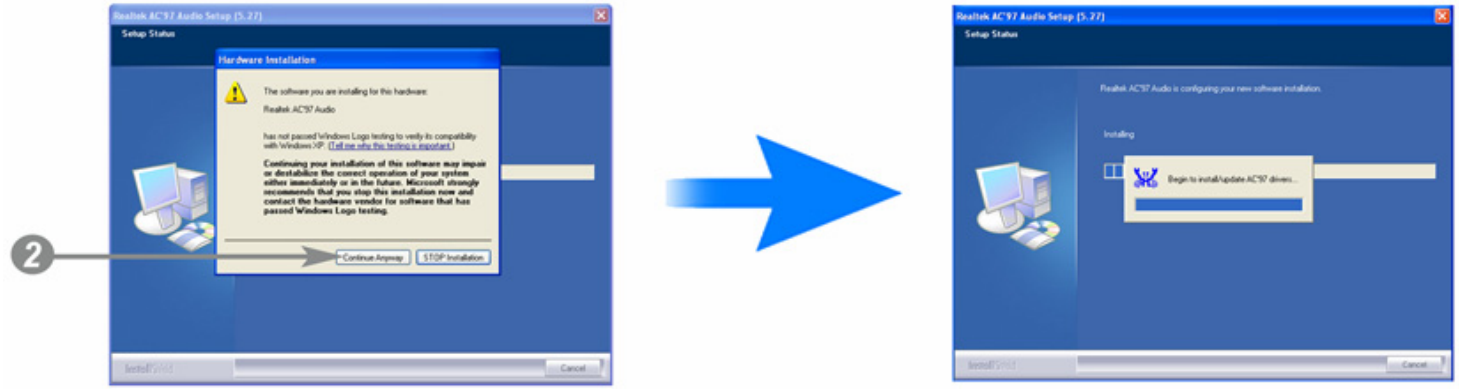

REALTEK GbE & FE Ethernet PCI NIC Driver - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
Install
Cancel
2.2.

4.5. Audio Driver Installation

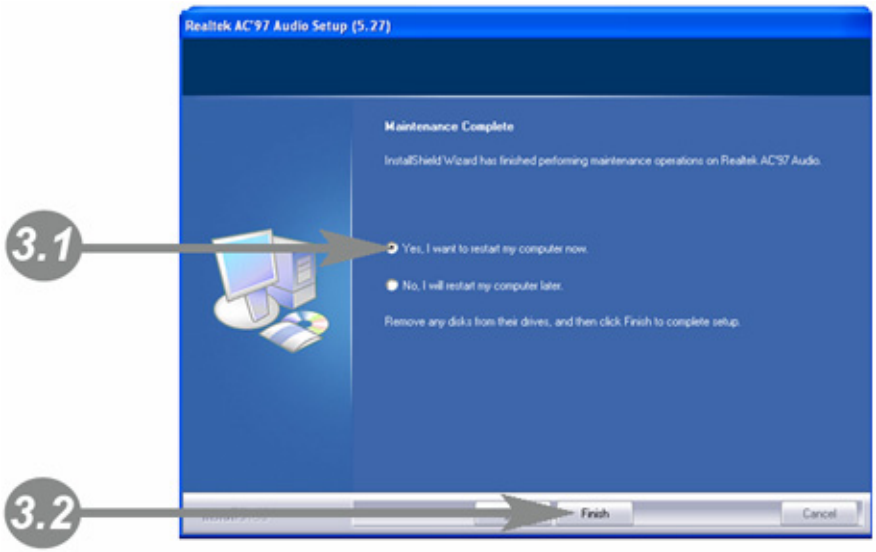
1. On the ***DRIVER BANK*** screen, click ***AC'97 Audio Drive*** and files are extracted automatically.



2. Click Continue Anyway and AC'97 driver start to install.



3. Installation completed. Select an option to restart computer now or later, and then click **Finish**.


Realtek AC'97 Audio Setup (5.27)
Maintenance Complete
InstallShield Wizard has finished performing maintenance operations on Realtek AC'97 Audio.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
3.1
3.2
Finish
Cancel

5.

Touchscreen Control Panel Quick Guide

5.1. Launch Touchscreen V7.3.COM

5.2. User interface

5.3. Serial Port Information

5.4. Virtual Button Settings

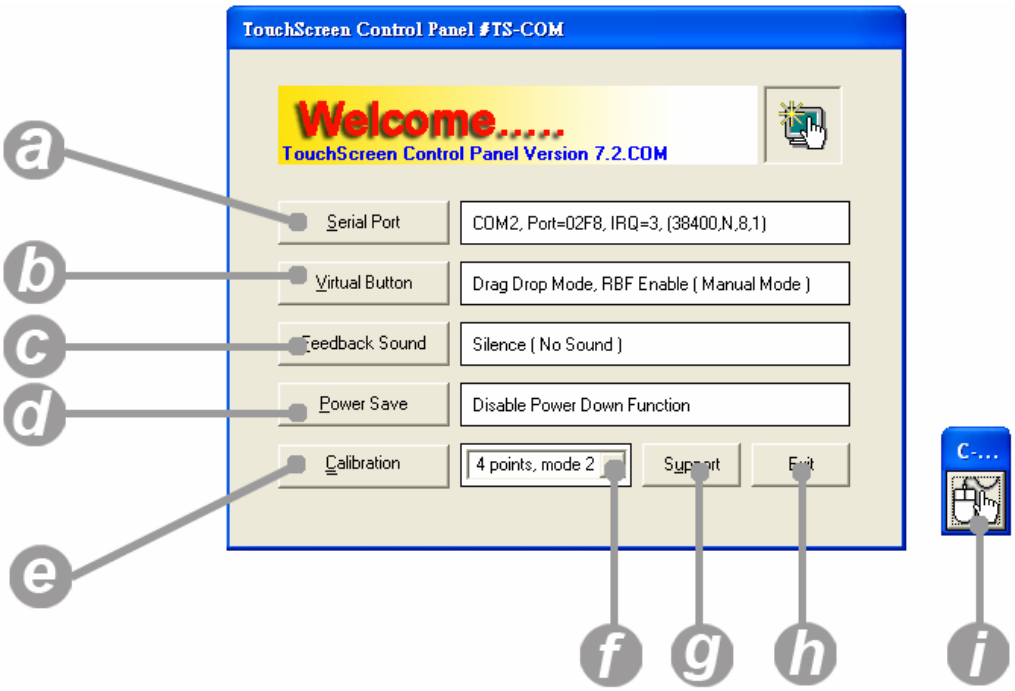
5.5. Feedback Sound

5.6. Screen Calibration

5.1. Launch Touchscreen V7.3.COM

1. Under Microsoft Windows XP, click “**start**” menu and select “**Programs**”, under ”**Touchscreen V7.3.COM**” menu, click “**Touchscreen Control Panel V7.3.COM**”, the control panel of the program shows.

5.2. User interface

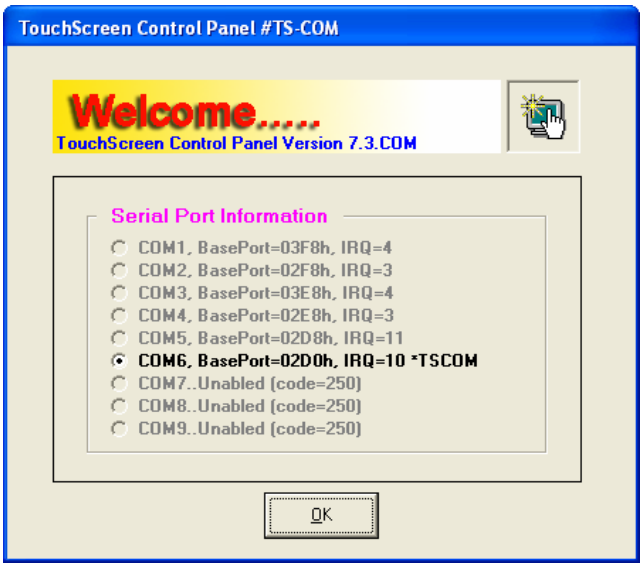


a	**Serial Port**	Display serial port information of the system.
b	**Virtual Button**	Open the virtual button setting dialogue box.
c	**Feedback Sound**	Open the feedback sound setting dialogue box.
d	**Power Save**	Open the power down timer adjustment dialogue box
e	**Calibration**	Switch to calibration screen.
f	**Calibration Mode Menu**	Select the calibration by clicking this drop-down list.
g	**Support**	Display technical support information.
h	**Exit**	Exit the program.
i	**Event Selector**	Enable right mouse button function. The default of this selector is with the left mouse button selected on. For details about event selector settings, please see “**How to Use Event Selector**” of Section 5.2.

5.3. Serial Port Information

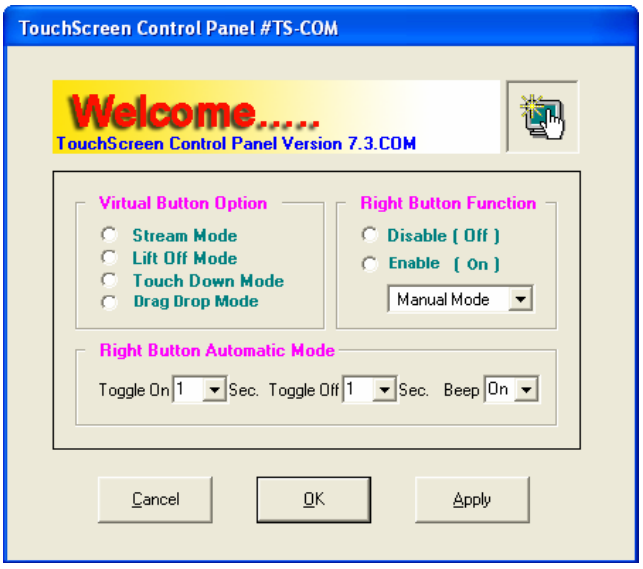
Click **Serial Port** button, the serial port information shows.

Click **OK** to back to the control panel.



5.4. Virtual Button Settings

Click **Virtual Button** button, the dialogue box shows:



The selected option will be in black.

Virtual Button Option

Under **Virtual Button Option** group box, there are four options:

- **Stream Mode**

Under this mode, all mouse button simulation will be disabled.

- **Lift off Mode**

Under **Lift off Mode**, tapping and holding on the screen equals pressing and holding on the left button of the mouse.

- **Touch Down Mode**

Under **Touch Down Mode**, one single-tapping equals one left mouse clicking.

- **Drag Drop Mode**

Drag Drop mode allows you to select an object on the screen by tapping, and then slide the selected object to a new location on the screen, the selected object will be dropped on the new location by releasing the touch.

The selected option will be in black.

Right Button Function

- **Disabled (Off)**

  Select this option, the event selector will be disabled and disappear.
- **Enable (On)**

  Select this option, the event selector will be enabled and show on the left-bottom corner of the screen.

- **Automatic Mode/Manual Mode Drop-down List**

  If the Drag Drop Mode under **Virtual Button Option** group box is select, the drop-down menu below the **Enable (On)** option will be enabled.

  Automatic Mode

  - Select this option, the Right Button Function will switch to automatic mode and the event selector will be disabled and disappear.

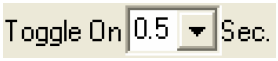
  Manual Mode

  - Select this option, the Right Button Function will switch to manual mode and the event selector will be enabled and show on the left-bottom corner of the screen.

  - Options under **Right Button Automatic Mode** will be enabled when **Manual Mode** is selected.

The selected option will be in black.

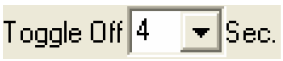
Right Button Automatic Mode



Toggle On time is the duration between the tapping on the screen and that the right mouse button is “virtually” pressed and held.

Release the tapping from screen after toggle-on, the pop-up menu shows.

The minimize value is 0.5 and maximum value is 5.



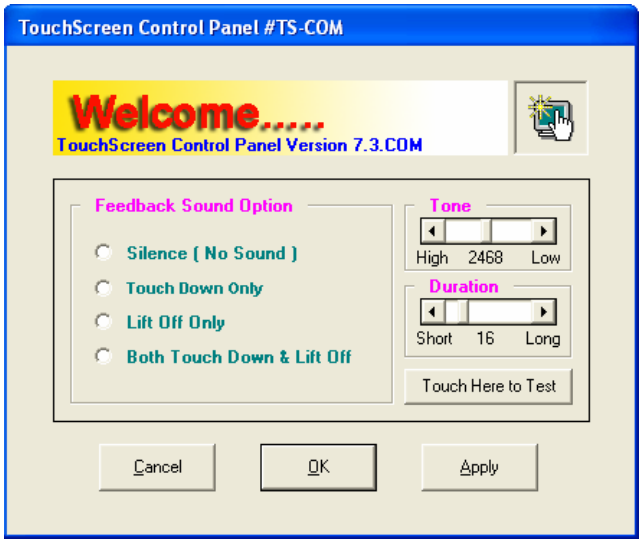
This option defines how long the right button function will be off.

The minimize value is 0.5 and maximum value is 5.

Click the drop-down menu to select **On** or **Off** to enable or disable the beep sound effect for toggle-on and toggle off.

5.5. Feedback Sound

Click **Feedback Sound** button, the dialogue box shows:



Feedback Sound Option

Silence (No Sound)

No any sound effect.

Touch Down Only
When this option is selected, there will be one “beep” sound when tapping on the screen.

Lift Off Only
When this option is selected, there will be one “beep” sound when releasing from the screen.

Both Touch Down & Lift Off
When this option is selected, there will be one “beep” sound when tapping on the screen and releasing from the screen.

Tone
Drag the bar to adjust the frequency of the sound effect.
The minimize value is 200 and maximum value is 5000.

Duration
Drag the bar to adjust how long the “Beep” sound will be.
The minimize value is 10 and maximum value is 50.

The selected option will be in black.

5.6. Screen Calibration
1. Click the drop menu next to the Calibration button to select calibration mode.

4 points, mode 1 – rectangular four-point calibration
4 points, mode 2 – rhombic four-point calibration

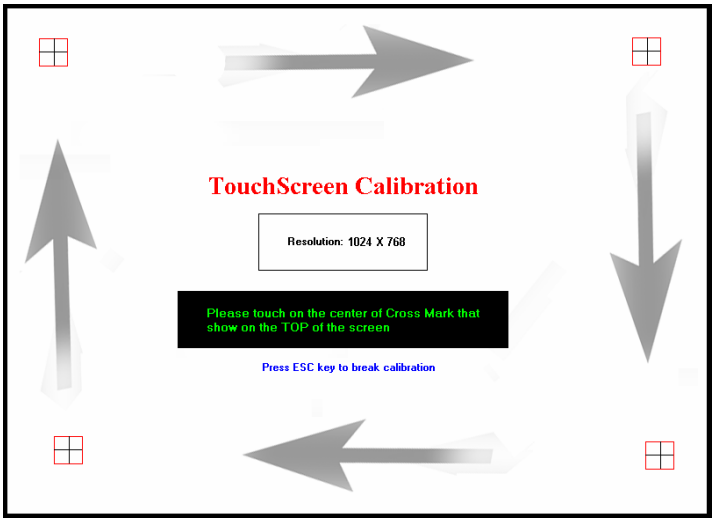
2. Click **Calibration** button to enter the calibration screen.

4 points, mode 1
a. The mark shows on the Left-up corner.
b. Follow the instruction in green to touch the center of Cross Mark.
c. When the instruction turns into yellow, releasing the tapping from the

screen.

d. Follow the instruction in green to touch the center of Cross Mark.

e. Repeat Step 2 – Step4 to finish the calibration procedure.


TouchScreen Calibration
Resolution: 1024 X 768
Please touch on the center of Cross Mark that show on the TOP of the screen
Press ESC key to break calibration

4 points, mode 2

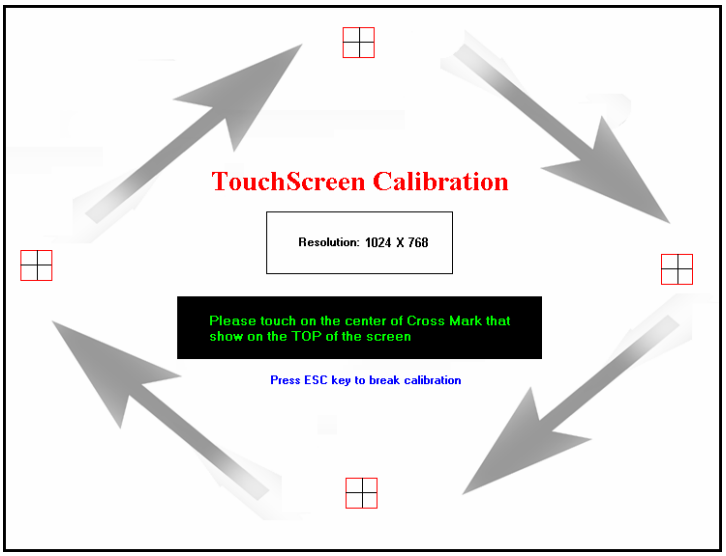
a. The mark shows in the middle of the length of the screen.

b. Follow the instruction in green to touch the center of Cross Mark.

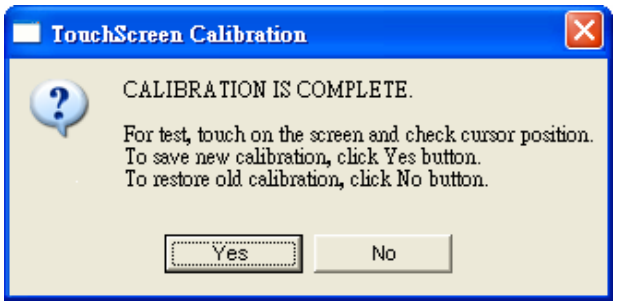
c. When the instruction turns into yellow, releasing the tapping from the screen.

d. Follow the instruction in green to touch the center of Cross Mark.

e. Repeat Step 2 – Step4 to finish the calibration procedure.


TouchScreen Calibration
Resolution: 1024 X 768
Please touch on the center of Cross Mark that show on the TOP of the screen
Press ESC key to break calibration

3. When the calibration procedure is completed, the message shows:


TouchScreen Calibration
CALIBRATION IS COMPLETE.
For test, touch on the screen and check cursor position.
To save new calibration, click Yes button.
To restore old calibration, click No button.
Yes
No

To save the new calibration, click **Yes**, to restore the old calibration, click **No**.

How to Use Event Selector

1. On the desktop of Windows, click icon.
2. icon change to .
3. Now the tapping is simulating right mouse button clicking.
4. After one tap on the screen, icon change to .
5. The tapping resumes to left mouse button clicking.

6.

I/O Definition

6.1. Power Connector

6.2. Compact Flash Storage Card Socket

6.3. Serial Port

6.4. VGA Connector

6.5. LVDS Connector

6.6. USB Port Connector

6.7. Cash Drawer Connector (RJ-11)

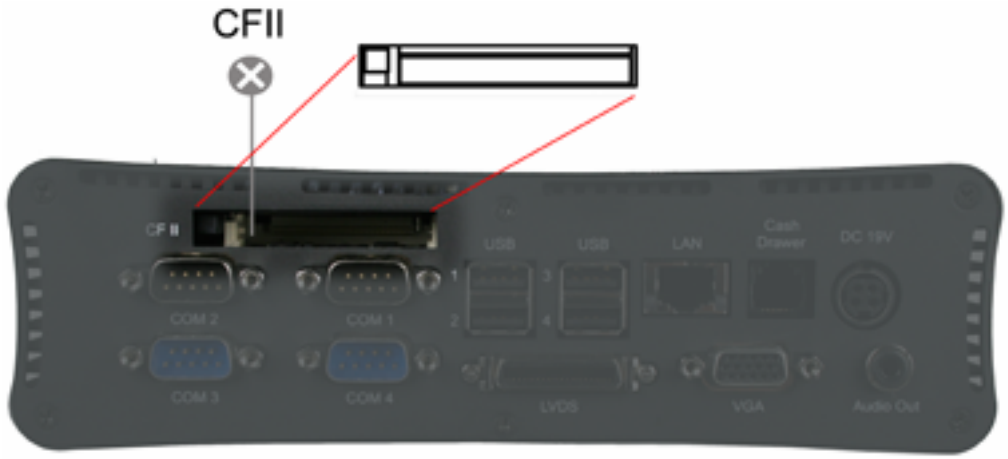
6.8. LAN Connector (RJ-45)

Please refer the detailed technical information about all I/O ports as followings.

6.1. Power Connector

PIN	Description	PIN	Description
1	GROUND	3	+12V
2	GROUND	4	+5V

6.2. Compact Flash Storage Card Socket



PIN	Description	PIN	Description	PIN	Description	PIN	Description	PIN	Description
1	GROUND	11	N/C	21	D0	31	D15	41	RESET#
2	D3	12	N/C	22	D1	32	CS3#	42	IORDY
3	D4	13	VCC	23	D2	33	N/C	43	N/C
4	D5	14	N/C	24	N/C	34	IOR#	44	N/C
5	D6	15	N/C	25	CARD DETECT2	35	IOW#	45	ACTIVE#
6	D7	16	N/C	26	CARD DETECT1	36	OBLIGATORY TO PULL HIGH	46	PDIAG#
7	CS1#	17	N/C	27	D11	37	IRQ15	47	D8
8	N/C	18	A2	28	D12	38	VCC	48	D9
9	GROUND	19	A1	29	D13	39	MASTER/SLAVE	49	D10
10	N/C	20	A0	30	D14	40	N/C	50	GROUND

6.3. Serial Port

COM Port 1/2/3/4			
PIN	Description	PIN	Description
1	RED	6	GROUND
2	DDCDAT	7	HSYNC
3	GREEN	8	GROUND
4	DDCCLK	9	VSYNC
5	BLUE		

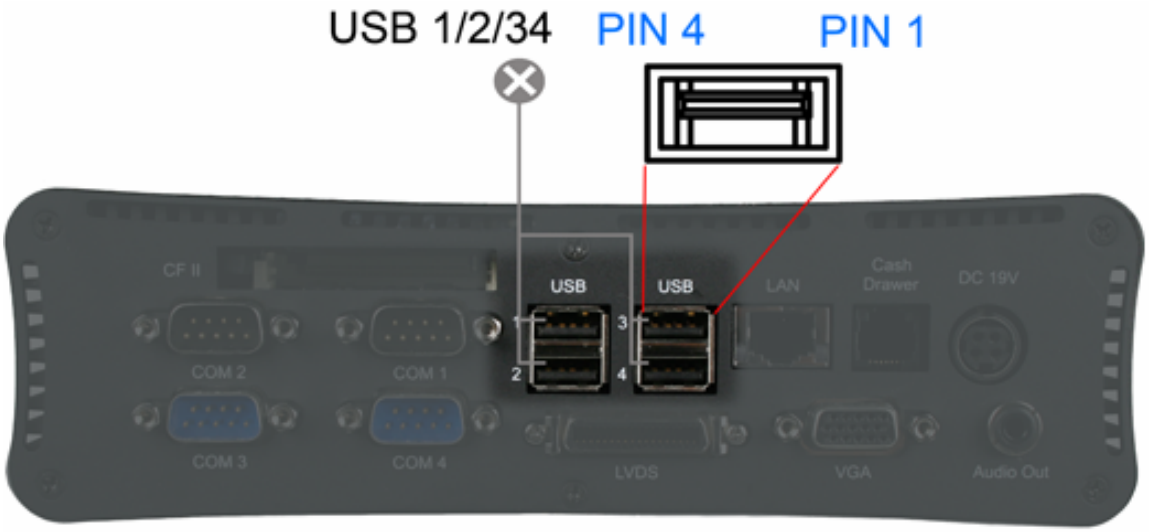
6.4. VGA Connector

PIN	Description	PIN	Description
1	RED	9	N/C
2	GREEN	10	Sync GND
3	BLUE	11	Ground
4	Ground	12	SDA;DDC 1/2B
5	DDC-GND	13	Horizontal Sync
6	Red GND	14	Vertical Sync
7	Green GND	15	SCL DDC 2B
8	Blue GND		

6.5. LVDS Connector

6.6. USB Port Connector

The system provides 4 built-in USB2.0 ports for new I/O bus expansion.



PIN	Description	PIN	Description
1	USB bus-powered	3	USB differential signal
2	USB differential signal	4	Ground

6.7. Cash Drawer Connector (RJ-11)

PIN	Description	PIN	Description
1	GROUND	4	DOUT_0
2	DIN_0	5	+12 V
3	N.C	6	GROUND

Cash Drawer Control

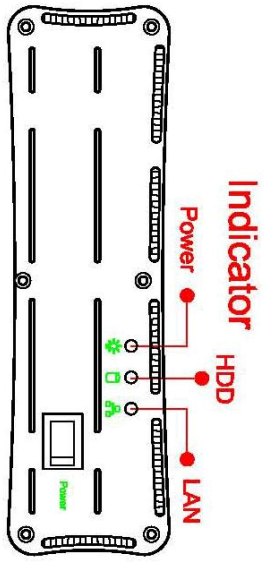
Status	Address	Value
Open	280H	Bit 4 = 0
Close	280H	Bit 4 = 1
Read Status	281H	Bit 0 = 0/1

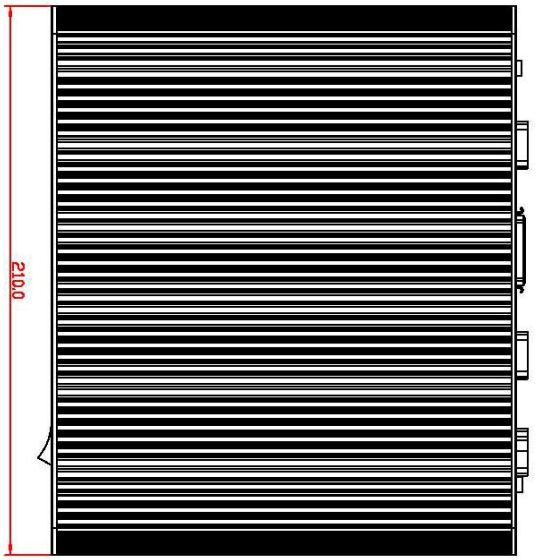
6.8. LAN Connector (RJ-45)

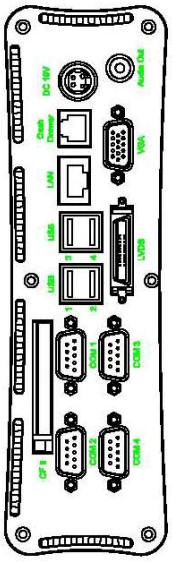
PIN	Description	PIN	Description
1	Transmit Out +	5	No Connection
2	Transmit Out -	6	Receive In -
3	Receive In +	7	No Connection
4	No Connection	8	No Connection

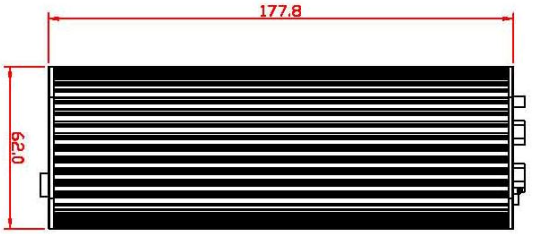
7.

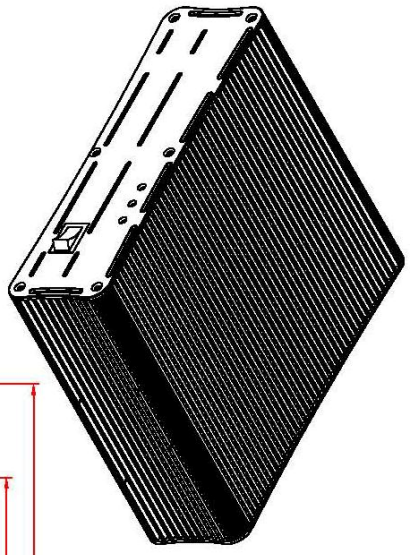
Specification

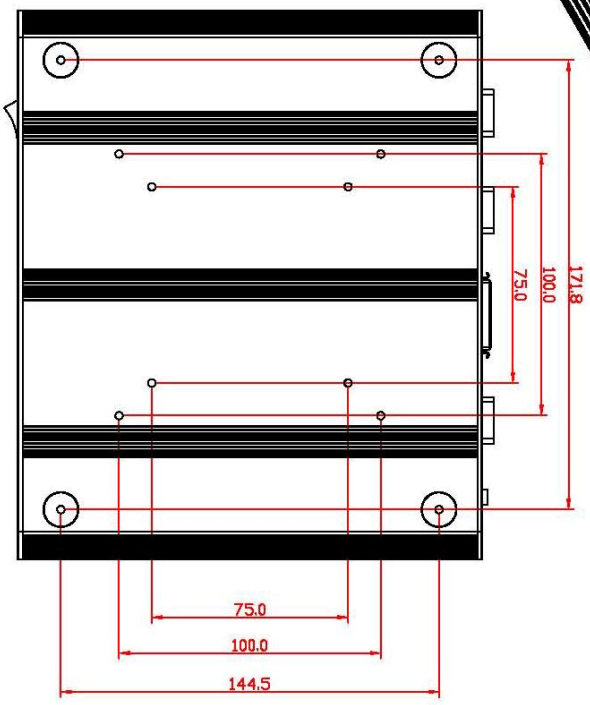












TOLERANCES	
.X ± 0.2	X° ± 0.25
.XX ± 0.1	.X° ± 0.15
.XXX ± 0.05	.XX° ± 0.05

Main Board	
CPU	Intel Ultra Lo Voltage Celeron M 1GHz w/o L2 cache
Chipset	Intel 852GM + ICH4
System Memory	SO-DIMM DDR 200/266, 128MB up to 1GB
Thermal Solution	Fan-less
OS	Microsoft Windows XP Professional, XPE, WEPOS, Windows CE, Linux
Storage Device	
HDD	1 x IDE, 2.5” HDD Drive Bay
Compact Flash	1 x Slot Compact Flash Type II
I/O Ports	
Serial	5 x RS-232, 1 x RS-232/422/485 COM1: DB-9, RS-232/422/485, Pin9 w/ RI/5V/12V Selectable by BIOS COM2/3/4: DB-9, RS-232, Pin9 w/ RI/5V/12V Selectable by BIOS COM5: Internal Pin Header COM6: Internal for Touch Panel
USB	4 x USB 2.0
LAN	1 x Gigabit Ethernet by RJ-45
Cash Drawer	1 x RJ11 (12V DC)
Audio	AC’ 97 2.0 Compliant,
VGA	1 x DB-15
SCSI	Combination interface of LVDS, RS-232, Power (3.3V, 5V, 12V) and LED
Others	
Power Input	External Adapter, 90W, 19VDC Input
Compliance	FCC / CE
Weight (Kgs)	2.4
Dimension	210(W) x 189(D) x 62(H) mm
Operating Temperature	5 – 40 Degree
Storage Temperature	-20 – 60 Degree
Storage Humidity	20 – 85% RH, non-condensing
Order Information	
BPC70-B-C1G	Fan-Less BOX PC with Intel ULV Celeron 1GHz CPU
Options	

Please refers to the **Spare Part List** of BPC70-B-C1G